

MDPH Community Education Project Addresses Antimicrobial Resistance and MRSA

Colonization and infection with methicillin-resistant *Staphylococcus aureus* (MRSA) have long been associated with hospitals and long-term care facilities. In recent years, both in Massachusetts and nationally, there has been an increase in MRSA infections that are not associated with health care facilities. That is, there has been an increase in "community-associated" MRSA, as opposed to "hospital associated" MRSA.

The U.S. Centers for Disease Control and Prevention (CDC) defines "community-associated MRSA (CA-MRSA) infection as MRSA infection with onset in the community in an individual lacking established MRSA risk factors, such as recent hospitalization, surgery, residence in a long-term care facility, receipt of dialysis, or presence of invasive medical devices. This term has also been used to refer to MRSA strains with bacteriologic characteristics (e.g., genotype, antimicrobial susceptibility profile) considered typical of isolates obtained from patients with CA-MRSA infections, although an association initially observed between microbiologic characteristics and MRSA transmission in the community versus healthcare settings appears to be breaking down (March 2006).

CA-MRSA is a problem for healthcare providers and others in Massachusetts for a number of reasons:

- In Massachusetts, and elsewhere throughout the country, MRSA infections are becoming more common.
- Identifying a MRSA infection can be difficult, because the signs and symptoms of MRSA infection are similar to those of other skin infections. MRSA can only be diagnosed by culture and laboratory testing.
- Misdiagnosis or delayed diagnosis of MRSA infection can result in delay of effective treatment and more serious complications.
- MRSA is part of a larger problem of antibiotic resistance. In the long term, *Staphylococcus aureus* may become resistant to many more antibiotics. For this reason it is important that healthcare providers diagnose MRSA early and accurately, prescribe appropriate antibiotics if needed, and direct patients to complete the full course of antibiotics, as prescribed.

At the same time, healthcare providers should be

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FLU FACTS: What You Need to Know

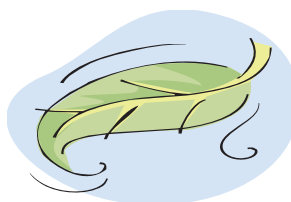
"FLU FACTS: What You Need to Know" is a statewide educational campaign, launched on October 4, 2006, by the Massachusetts Department of Public Health (MDPH), to inform the public about three different types of influenza (seasonal flu, avian or bird flu, and pandemic flu) and the importance of planning for an influenza pandemic.

Municipal boards of health and over 60 organizations, including media outlets, healthcare providers, business and industry, schools, colleges, and faith, civic and social service organizations statewide will help MDPH educate the public and protect the health of residents across the Commonwealth.

The campaign components include: multi-language print materials, public service announcements on various TV and radio stations, transit placards and posters on the MBTA and on regional transit, and an educational TV program. The TV program has been distributed to local cable stations and explains the fundamentals of influenza, outlines what local, state and federal governments are doing to prepare for an influenza pandemic and urges residents to begin their own preparation for a possible pandemic. The media components will run through December.

Another component of the campaign is school-based, directed at helping elementary school students understand the different types of flu and how they can protect themselves from getting the flu. There is a coloring book ("The Stay Healthy Coloring Book") and resources for teachers and staff around hand hygiene and other flu-prevention strategies.

FLU FACTS posters, hand cards and the coloring book are available to be downloaded from the MDPH flu website at <http://www.mass.gov/dph/flu> (choose "FLU FACTS: What You Need to Know" from the featured links menu). You can also order the posters and hand cards using the Materials Request Form, also available on the website.



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MRSA

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cautious about the unnecessary use of antibiotics, which can contribute to the problem of antibiotic resistance.

Prevention of CA-MRSA infection is the focus of a community education project initiated by the Massachusetts Department of Public Health, Division of Epidemiology and Immunization, using federal funds. The primary goal of this project is to develop educational materials about antimicrobial resistance and community-associated MRSA for specific audiences, such as school nurses, coaches and athletic directors, primary health care providers, and corrections officers and inmates. The selection of these target audiences was based in part on epidemiologic data. Clusters of MRSA infection have been documented among prison inmates, athletes playing contact sports, day care attendees, and other groups which are characterized by "crowding, frequent skin-to-skin contact between individuals, participation in activities that result in compromised skin surfaces, sharing of personal items that may become contaminated with wound drainage, and challenges in maintaining personal cleanliness and hygiene" (CDC, 2006). Interviews were conducted during the summer of 2005 with representatives of these target audiences to determine knowledge about MRSA and antimicrobial resistance, and what educational materials would be most helpful.

The results of the interviews were used to develop of a set of educational materials, including an antibiotic resistance and MRSA website, and print materials concerning MRSA and antibiotic resistance for various audiences (patients, athletes, inmates, corrections officers, parents, and so forth). Many of these materials are now available at the MDPH website (mass.gov/dph, search for "Antibiotic Resistance" under "Health Topics"). Others will be distributed in mailings to school nurses, coaches and athletic directors, primary care providers, and others, during the fall of 2006. The emphasis in these materials is on educating patients, parents, students, inmates and athletes about hand washing, personal hygiene, skin care, taking cuts and scratches seriously, proper wound care, and getting medical attention if a skin infection fails to heal on its own. Also, all of the materials have been developed in the context of educating target audiences about the overuse and misuse of antibiotics, which can contribute to the problem of antibiotic resistance.

For more information and for educational materials about antibiotic resistance and MRSA, please go to mass.gov/dph and search for "Antibiotic Resistance" under "Health Topics."

For recent information from the CDC concerning strategies for clinical management of MRSA in the community, please go to http://www.cdc.gov/ncidod/dhqp/pdf/ar/CAMRSA_ExpMtgStrategies.pdf

Source:

Gorwitz RJ, Jernigan DB, Powers JH, Jernigan JA, and Participants in the CDC-Convended Experts' Meeting on Management of MRSA in the Community. Strategies for clinical management of MRSA in the community: Summary of an experts' meeting convened by the Centers for Disease Control and Prevention. 2006. Available at http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca.html

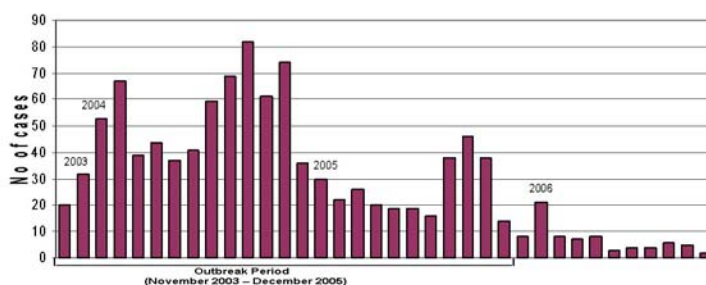
Hepatitis A in Massachusetts – An Update

From November 2003 through December 2005, Massachusetts experienced an outbreak of hepatitis A, with 1,010 cases; an average of 468 cases per year. This is significantly higher than the average of 206 cases per year for 1996-2002. Figure 1 shows the epidemic curve, the peak of the outbreak being mid-to late 2004. The epidemiologic investigation conducted by the Massachusetts Department of Public Health (MDPH), Division of Epidemiology and Immunization showed that associated with risk were: unemployment, IVdrug use, homelessness, other drug use, and/or incarceration. Many cases had more than one risk factor.

Measures specifically targeted to at-risk populations were used to control the spread of infection and reduce the number of cases. Immune globulin (IG) was given to people who were in close contact with confirmed cases. Vaccination was also a key intervention strategy requiring collaboration among local public health, local health care and community-based agencies. An educational campaign, including regional summits, and development and distribution of hepatitis A materials, was also implemented. The large and sustained effort by all partners contributed to the decrease in cases. These efforts should be recognized and acknowledged. Cases continue to decrease; from January 1, 2006 through November 1, 2006, only 68 confirmed cases of hepatitis A were reported.

MDPH continues to promote hepatitis A vaccination, and enhanced collaboration and partnership at the local level. For more information regarding state-supplied vaccine and eligibility, call the Division of Epidemiology and Immunization, Vaccine Unit at (617) 983-6828. Additionally, regional health educators are available for on-site education and distribution of educational materials. To contact your regional health educator, call (617) 983- 6800.

**Figure 1: Confirmed Hepatitis A Cases by month
Nov 03 - Oct 06**



Focus on Adolescent Immunizations

The topic of immunization generally conjures images of infants receiving recommended childhood immunizations or elderly people getting their annual flu shot. Rarely is the image one of a healthy adolescent receiving a vaccine. It is important to remember that adolescents, those 11-18 years of age, also require a number of important immunizations which help to maintain their health and the health of their friends, family and community.

Over the past two years, three newly licensed vaccines have been specifically recommended by the Advisory Committee on Immunization Practices (ACIP) for adolescents: tetanus, diphtheria and acellular pertussis (Tdap), meningococcal conjugate (MCV4) and human papillomavirus (HPV) vaccines.

- **Tdap:** Tdap as a single booster dose recommended at age 11-12 years and for those 13-18 who have not yet received a booster of either Td or Tdap. Those 11-18 years of age who have received a booster dose of Td are encouraged to receive a dose of Tdap for protection against pertussis.
- **MCV4:** One dose of MCV4 is recommended at 11-12 years of age. It is also recommended for adolescents at high school entry (15 years) and college freshmen living in dorms who have not been previously vaccinated.
- **HPV:** HPV vaccine as a 3-dose series is recommended for females 11-12 years of age, and for females 13-18 years of age who were not previously vaccinated. However, it can be administered to females as young as 9 years of age.

These advances in adolescent immunization are important components of comprehensive preventive health services for all adolescents, and form a platform for the 11-12 year old visit.

The 11-12 year old visit is also a time to catch-up immunizations in those who may not have received all of the routinely recommended childhood vaccines. Adolescents may need hepatitis B, measles, mumps, rubella (MMR) and varicella vaccines to bring their immunizations up to date.

There have also been recent updates to recommendations for MMR and varicella vaccine. New recommendations for the prevention of mumps stress two doses of mumps-containing vaccine. MDPH only supplies the combination MMR vaccine formulation so students born in Massachusetts should already have 2 doses of mumps-containing vaccine. However, this may not be the case for adolescents from other states and countries. In order to decrease break-through chickenpox disease, two doses of varicella vaccine are now recommended for all children. Second dose catch up vaccination is recommended for anyone who has previously received only one dose. Other vaccines like hepatitis A, pneumococcal and

influenza vaccine may also be needed by adolescents with specific health risks.

Personal immunization records (like the "Blue Book") should be updated with immunizations received in adolescence, and brought to every provider visit. This immunization record may be needed for school or college enrollment.

For detailed information on recommended immunizations, please see the Advisory Committee on Immunization Practices (ACIP) webpage at: <http://www.cdc.gov/nip/ACIP/default.htm>

Sources:

Centers for Disease Control and Prevention. Prevention and Control of Meningococcal Disease Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2005;54(No. RR-7):13.

Centers for Disease Control and Prevention. Preventing tetanus, diphtheria, and pertussis among adolescents: use of tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2006;55(No. RR-3):22.

HPV Vaccine Questions and Answers, available at: <http://www.cdc.gov/nip/vaccine/hpv/hpv-faqs.htm>



New Recommendations for 2-Doses of Measles, Mumps, Rubella (MMR) or Mumps-containing Vaccine

In response to the recent national mumps outbreak, the Advisory Committee on Immunization Practices (ACIP) recommends two doses of MMR vaccine or mumps-containing vaccine for the following groups:

- all school-aged children (i.e., grades K-12); and
- adults at high risk (i.e., persons who work in health-care facilities, international travelers, and students at post-high school educational institutions).

Since MDPH only supplies the combination MMR vaccine and we have a 2 dose measles requirement for school and college entry, students born in Massachusetts should already have 2 doses of mumps-containing vaccine. However, this may not be the case for students from other states and countries. Please review vaccination records to ensure school-aged children and adults at high risk are appropriately immunized.

While there were no mumps cases in Massachusetts linked to the national outbreak, 6 sporadic cases have been reported this year. However, a measles outbreak occurred in Massachusetts this year with 18 cases, all in adults. These cases are a reminder that vaccine-preventable diseases are still present a threat and it is important to remain vigilant about immunization.

Chlamydia Re-screening in Massachusetts Family Planning Clinics

The CDC's 2006 STD Treatment Guidelines recommend that clinicians follow up positive chlamydia tests in women with a repeat screening test, ideally collected 3-4 months after completion of initial antibiotic therapy. It is important to differentiate a repeat screening test from a test of cure which is collected approximately 3 weeks post-treatment and is only recommended for pregnant women. According to the CDC, re-infection or persistent infection occurs in 10-15% of cases. Repeat infections are important to detect because they are associated with higher rates of pelvic inflammatory disease as compared to initial infections.

The Division of STD Prevention recently conducted a project designed to assess rates of repeat chlamydia screening among Massachusetts family planning clinics that participate in the Infertility Prevention Project. In 2005, 482 chlamydia cases were reported to MDPH from participating family planning clinics. The sample included both females and males, however approximately 90% of cases occurred among females. Information for each reported case was abstracted from State Laboratory Information System and the STD*MIS database, including occurrence of re-screening, time elapsed to re-screening, and results of any follow up testing.

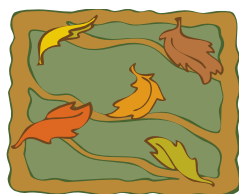
Of the 482 cases in the sample, 214 (44%) were re-screened and of those re-screened, 46 (21%) tested positive for chlamydia. Patients under age 20 were more likely to be re-screened (see Figure 1) as well as to test positive.

These findings indicate that there is a relatively high rate of repeat chlamydia infections occurring among young family planning clinic attendees. In 2006, MDPH began providing clinics with a monthly listing of all positive cases at their site. It is hoped that this system will facilitate call backs for re-testing, and partner notification and treatment.

For questions or more information regarding diagnosis and management of sexually transmitted diseases please contact Bill Dumas, RN, Director of Clinical Services at 617-983-6950.

Sources:

Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2006. MMWR 2006; 55(RR11):1-94.



CDC Publishes 2006 STD Treatment Guidelines Report

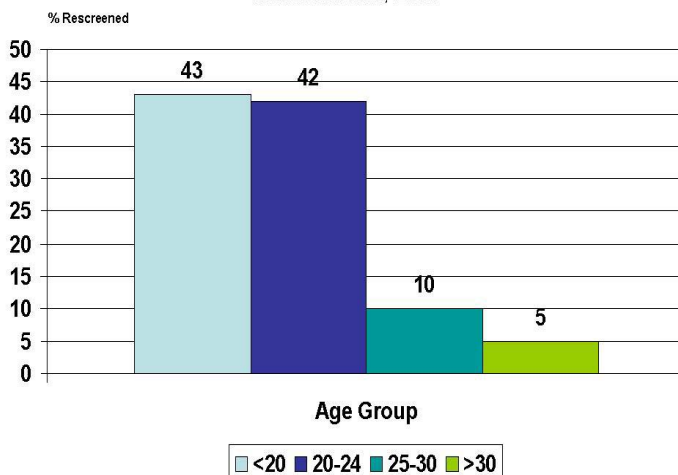
The newly updated Sexually Transmitted Disease Treatment Guidelines have been published by the Centers for Disease Control and Prevention (CDC) and can be found online at <http://www.cdc.gov/std/treatment/2006/toc.htm>.

These update the Sexually Transmitted Diseases Treatment Guidelines, 2002. Included are an expanded diagnostic evaluation for cervicitis and trichomoniasis, new antimicrobial recommendations for trichomoniasis, additional data on the clinical efficacy of azithromycin for chlamydial infections in pregnancy, discussion of the role of *Mycoplasma genitalium* infection and trichomoniasis in urethritis/cervicitis and treatment-related implications, emergence of lymphogranuloma venereum proctocolitis among men who have sex with men (MSM), expanded discussion of the criteria for spinal fluid examination to evaluate for neurosyphilis, the emergence of azithromycin-resistant *Treponema pallidum*, increasing prevalence of quinolone-resistant *Neisseria gonorrhoeae* infection in MSM, revised discussion concerning the sexual transmission of hepatitis C, postexposure prophylaxis after sexual assault, and an expanded discussion of STD prevention approaches.

The New England STD/HIV Prevention Training Center provides training for health care providers on the most updated information in the diagnosis and treatment of STDs. A calendar of trainings can be found at www.state.ma.us/dph/cdc/stdcmai/stdtcmi.htm.

Percentage of Patients Testing Positive for Chlamydia Re-screened within Three to Five Months

Infertility Prevention Project Sites
Massachusetts, 2005



Refugee and Immigrant Health

Refugee Admissions to the United States

Refugee admission numbers are determined annually in accordance with the Immigration and Nationality Act (INA) and do not carry forward into subsequent federal fiscal years (FFY). A total of 41,277 refugees were admitted to the U.S. during FFY 2006.

President George W. Bush signed the Presidential Determination on FFY 2007 Refugee Admissions to the United States on October 11, 2006. A total of 70,000 admissions were authorized, with 20,000 in the "unallocated reserve" category. The Administration's *Proposed Refugee Admissions for Fiscal Year 2007: Report to The Congress*, which is required as part of the INA, describes the refugee situation and provides a plan for resettlement of certain refugees in the U.S. The complete report is available at www.state.gov/g/prm/rls/rpt/2006/73619.htm.

The U.S. continues to use a worldwide priority system for identification and processing of refugee applications. As they relate to FFY07 admissions, the priorities are:

Priority 1: Individual Referrals. Priority 1 is used for individuals identified by the United Nations, a U.S. embassy, or a non-governmental organization as in need of immediate protection and resettlement. This priority can be used for individuals of any nationality.

Priority 2: Group Referrals. Priority 2 is used for groups that are determined to be in need of protection and resettlement. To be considered for U.S. resettlement, individual refugees must be in a designated group.

Three in-country programs for refugee processing continue – in the Former Soviet Union, Cuba and Vietnam. In these programs, refugees do not have to leave their countries of origin to be considered for U.S. resettlement. Individuals still need to be a member of a specific group to meet the Priority 2 designation; these include religious minorities in the former Soviet Union with close family ties to the U.S., certain Cubans, and Vietnamese eligible for earlier programs, but unable to access them.

Other groups outside of their country of origin and identified for Priority 2 processing include:

Burmese in Tham Hin Refugee Camp in Thailand

Iranian religious minorities

Certain Burundian refugees in Tanzania

Kunama (an ethnic minority from Eritrea) in Ethiopia

Tibetans in Nepal

Congolese Banyamulenge (a people of ethnic Tutsi origin) in Burundi

During the year, other groups may receive the Priority 2 designation. It is often a multi-year process from the time refugee populations are first identified as potential Priority 2 groups and processing for U.S. resettlement begins.

Priority 3: Family Reunification Cases. Consideration for resettlement in the U.S. is extended to refugees who are immediate family members – spouses, unmarried children under 21 years of age or parents – of persons who came to the U.S. as refugees or were granted asylum in the U.S. Not all nationalities are eligible for Priority 3 processing – the designation reflects the worldwide situation, repatriation efforts and U.S. foreign policy. For FFY2007 eligible nationalities come from countries that include: Afghanistan, Burma, Burundi, Colombia, Democratic Republic of Congo, Republic of Congo, Cuba, Democratic People's Republic of Korea (North Korea), Eritrea, Ethiopia, Haiti, Iran, Iraq, Rwanda, Somali, Sudan, and Uzbekistan.

Refugee Admissions to the United States: FFY 2005-2007

Region	Total Arrivals in FFY05	FFY06 Regional Ceiling	Projected Arrivals in FFY06 ¹	FFY07 Regional Ceiling
Africa	20,749	20,000	17,200	22,000
East Asia	12,071	15,000	5,800	11,000
Europe and Central Asia	11,316	15,000	11,500	6,500
Latin America/Caribbean	6,700	5,000	3,000	5,000
Near East/South Asia	2,977	5,000	4,000	5,500
Unallocated Reserve		10,000		20,000
TOTAL	53,813	70,000	41,500	70,000

¹ Actual arrivals totaled 41,277; A breakdown by world region has not been posted as of 11/28/06.



TB Clinical Service Delivery: Updates from a 2-Year Assessment Process

The current model for providing tuberculosis services in Massachusetts is through 20 statewide TB clinics under contract to serve high-risk cases, contacts and persons with latent TB infection (LTBI) residing in both urban and rural areas. Clinic providers are TB experts with experience serving the target population and services are free of charge. Care is delivered within a public health case management system that involves state and local public health nurses and administrators, local referring providers, hospitals and community health centers. Given infrastructure resource constraints at the state and local level, changing migration trends and epidemiologic shifts in TB morbidity, the Division of TB Prevention and Control determined in early 2004, that there was a need to assess TB service delivery and to develop a strategic plan for effectively reaching target populations.

In September 2004, the Division was matched with a Public Health Prevention Specialist (PHPS) Fellow (Shuma Panse) through the Centers for Disease Control and Prevention (CDC) to lead this assessment process. The "Clinical Service Delivery Evaluation Project" sought to answer the following questions:

1. What is the current state of TB clinical service delivery?
2. How is service delivery viewed *inside* the TB Division, at the clinic level and *outside* the TB Division?
3. How can service delivery be improved?

Using the CDC Program Evaluation Framework to guide this process, project activities commenced in January 2005. Activities included:

1. Analysis of existing TB Division databases (such as the TBIS - Tuberculosis Information System) to determine utilization, population demographics and completion of therapy rates at the clinic level.
2. Semi-structured interviews with TB clinic-affiliated physicians and nurses to obtain feedback on clinic-related experience and qualitative data on reasons for poor completion of therapy rates and how to improve TB clinical service delivery as a whole.

TB Division database analysis: Results of the database analysis revealed completion of therapy rates for LTBI treatment ranging from 23.1% to 79.1%. While some clinics have good outcomes for treatment completion, there is clearly room for improvement. Further data analysis to identify possible reasons for incomplete treatment were difficult due to incomplete data. For example, for most clinics the variable 'Reason for Not

Completing Therapy' was left blank. Second, although the CDC definitions were used to identify "reasons", these reasons (such as 'Patient stopping on his/her own initiative') do not provide much insight into why therapy is not completed.

Semi-structured interviews: These interviews were conducted with clinical service providers (physicians and nurses). A total of 32 interviews were held from March 2005 to May 2006, with each interview lasting for approximately 30-40 minutes. Themes that emerged from this process are summarized in the table.

Themes from Physician and Nurse Interviews March 2005 – May 2006	
Theme	Sample Quote
The clinic-based system as an effective model	"The current system works because it looks at the long-term [view of the patient]. Private clinics don't do this."
Reasons why patients do not return to clinic/complete LTBI therapy	Fear of authority/government amongst certain populations. Cultural reasons – "Some groups are just less compliant than others." Only to fulfill certain requirements: "There are many folks who come in for a work clearance, and just want x-rays." BCG: "The issue of skin testing will always come back."
Education/training needs	"There is a lack of awareness [amongst] primary care providers on PPD standards, booster testing, who to screen." "Education of primary care physicians is important."
Using outside resources for LTBI follow-up	"Follow-up of children through schools is a possibility."

Interview feedback from physicians and nurses working at the clinic level illustrates that the existing system has several key strengths, namely the effectiveness of the clinic model in delivering services and staff TB expertise. Providers cited numerous reasons for low completion rates, including cultural reasons and a lack of education on the part of patients and non-TB providers about TB. Areas for improvement include targeting providers outside the public system (private PCPs) for further education on TB prevention and control, particularly those serving high-risk foreign-born populations. Also, as the database analysis revealed, there is a clear need to improve data collection processes so that better patient data can be captured.

The final results of this assessment will be used to guide program planning for the Division of TB Prevention and Control. A complete report will be available in the coming months.



HIV/AIDS Surveillance

HIV/AIDS in Massachusetts Among the Foreign Born

The population of Massachusetts is very diverse. Immigrants, refugees, and others born outside the U.S. represent 12% of the Massachusetts population. In addition, 3% of the Massachusetts population were born in Puerto Rico, U.S. territories and other U.S. Dependencies.

As of October 1, 2006, a total of 16,286 people were living with HIV/AIDS (PLWHA) in Massachusetts. Of these, 11,253 (69%) were born in U.S., 1,968 (12%) were born in U.S. dependencies (mostly Puerto Rico), and 3,065 (19%) were born in countries other than the U.S. The demographics of PLWHA in Massachusetts by country of birth is described in the chart.

The proportion of PLWHA who were born in countries other than the U.S. has been increasing. For example, the percentage of AIDS cases diagnosed among people born outside of the U.S. grew from 8% in 1992 to 29% in 2002.

Persons born outside the U.S. or its dependencies are more likely to be simultaneously diagnosed with HIV and AIDS. Simultaneous diagnosis is defined as less than two months between HIV infection diagnosis and AIDS-defining condition indicative of severe immunocompromise. This late diagnosis of HIV infection may be due to health seeking behavior, access to care, concern about stigma and knowledge of HIV infection status.

HIV/AIDS in the foreign-born needs to be considered in the development and delivery of HIV/AIDS prevention, education, healthcare, and support services.

Demographic Profile of PLWHA in Massachusetts Based Upon Country of Birth
Data as of October 1, 2006: Alive Cases

	Living with HIV/AIDS					
	Non-US Born		US Born		US Dependency Born	
	No.*	%	No.*	%	No.	%
3,065	100.0%		11,253	100.0%	1,968	100.0%
RESIDENCE						
Boston	1,186	38.7%	3,777	33.6%	344	17.5%
Metrowest	636	20.7%	1,326	11.8%	68	3.5%
Central	218	7.1%	932	8.3%	303	15.4%
Northeast	580	18.9%	1,427	12.7%	360	18.3%
Southeast	314	10.2%	1,780	15.8%	151	7.7%
Western	74	2.4%	1,327	11.8%	489	24.8%
Prisoners	56	1.8%	681	6.1%	253	12.9%
EXPOSURE MODE						
Male Sex w/Male	596	19.4%	4,716	41.9%	160	8.1%
Injecting Drug User	152	5.0%	3,079	27.4%	1,053	53.5%
Male Sex w/Male and IDU	33	1.1%	424	3.8%	61	3.1%
Heterosexual	615	20.1%	1,168	10.4%	395	20.1%
Other	45	1.5%	340	3.0%	27	1.4%
Presumed Heterosexual**	1,297	42.3%	980	8.7%	207	10.5%
Undetermined	328	10.7%	546	4.9%	65	3.3%
GENDER						
Male	1,808	59.0%	8,448	75.1%	1,342	68.2%
Female	1,257	41.0%	2,805	24.9%	626	31.8%
RACE/ETHNICITY						
White	362	11.8%	6,991	62.1%	25	1.3%
Black	1,778	58.0%	2,717	24.1%	19	1.0%
Hispanic	744	24.3%	1,398	12.4%	1,924	97.8%
Other	181	5.9%	147	1.3%	0	0.0%

*Total includes persons with unknown residence at diagnosis of HIV/AIDS

**Risk of Partner(s) is unknown and other primary risk categories have been denied.

HIV/AIDS and Men Who Have Sex With Men (MSM) in Massachusetts

AIDS was first recognized among men who have sex with men (MSM). Although the overall number of cases of HIV/AIDS attributed to male-to-male sex each year has decreased over time, it is the predominant reported mode of exposure in Massachusetts among people recently diagnosed with HIV infection. Male-to-male sex (including male-to-male sex/injection drug use) accounts for the largest proportion (34%) of HIV exposure among people diagnosed with HIV infection within the three-year period 2002 to 2004.

General Statistics

Within the three-year period 2002 to 2004, 941 of people diagnosed with HIV infection were men who have sex with men, accounting for 34% of all reported cases and 49% of reported HIV infection among men in Massachusetts. Of the 941 HIV-infected MSM, 6% (N=57) also have been reported to have injected drugs. On December 31, 2004, there were 5,482 men living with HIV/AIDS with HIV infection attributed to male-to-male sex, representing 36% of all people living with HIV/AIDS in Massachusetts, and 50% of men living with HIV/AIDS. Of these 5,482 men, 9% (N=479) were also known to have injected drugs.

Diagnosis of HIV Infection over Time

The proportion of men diagnosed with HIV infection who were reported to have engaged in male-to-male sex (not including those with a history of injection drug use) rose from 40% in 1999 to 48% in 2003 and then decreased to 45% in 2004.

Race/Ethnicity

The distribution of race/ethnicity among MSM diagnosed with HIV infection within the three-year period 2002 to 2004 was 70% white (non-Hispanic), 12% black (non-Hispanic), 15% Hispanic, and 2% other. Of all men recently diagnosed with HIV infection attributed to male-to-male sex, the majority (70%) is white (non-Hispanic). Whereas, among men recently diagnosed with HIV infection and exposed through other modes, the largest proportions are black (non-Hispanic) (39%), and Hispanic (32%). The distribution of race/ethnicity among MSM living with HIV/AIDS is similar to that for MSM recently diagnosed with HIV infection: 73% percent are white (non-Hispanic), 12% are black (non-Hispanic), 12% are Hispanic, and 2% are of other race/ethnicity.

AIDS Diagnoses over Time

The proportion of MSM among reported AIDS diagnoses (including those who injected drugs) declined from 36% in 1995 to 24% in 2000. From 2001 to 2004, men who have sex with

continued on page nine

You Be The Epi

You receive a report of a new suspect case of tuberculosis (TB). As the public health nurse in your local community, you are the TB case manager. The patient is a 35 year-old male from Brazil, with complaints of cough, night sweats, fever and chest pain; sputum specimen results are pending; he has a positive tuberculin skin test of 17 mm; and an abnormal chest x-ray (CXR), showing a large pleural effusion. The patient was started on the four standard anti-tuberculous drugs.

Do you need to conduct a contact investigation?

Not all TB suspects will require a contact investigation (CI). Your task is to determine whether the suspect case meets the criteria for a CI. The factors you will need to consider include: site of disease (pulmonary/laryngeal/pleural, or non-pulmonary), laboratory status (sputum smear or nucleic acid amplification test) and radiologic presentation. With rare exceptions, only patients with pulmonary or laryngeal TB transmit infection. The new Centers for Disease Control and Prevention (CDC) CI guidelines group pleural disease with pulmonary disease because sputum cultures can yield *Mycobacterium tuberculosis* organisms even when no lung abnormalities are apparent on a CXR. Relative infectiousness has been associated with positive sputum cultures and is highest when the smear results are positive. Patients with lung cavities are considered more infectious than those without cavities. The importance of small lung cavities detectable by computerized tomography, but not on plain CXRs, is undetermined.

The suspect patient has pleural disease, an unknown sputum smear status and an abnormal chest x-ray consistent with TB. Using the new CDC CI guidelines, this suspect's presentation indicates that a CI should be done.

The contact investigation:

Where do you begin? With a potentially infectious patient, a CI begins with the initial case/suspect transmission risk assessment. Comprehensive information regarding the index patient is the foundation of a CI, including disease characteristics, onset of illness, exposure locations, current medical factors including previous and current TB treatment status and names of contacts. Careful interviews with the patient are needed to establish rapport and gather information. Factors that affect the likelihood of transmission include age, HIV status and treatment status. Transmission from children less than ten years of age is unusual, and thus CIs are not usually needed when the case is a child under 10 years of age. HIV-infected patients who have pulmonary or laryngeal TB are usually as infectious as non-HIV-infected patients. Patients rapidly become less infectious after starting effective treatment and are often considered non-infectious after receiving two or more weeks of treatment, with demonstrated clinical improvement.

You perform a transmission risk assessment and determine that in addition to the above factors, this patient has been

symptomatic for three months, including a cough. His sputum smears are reported to be smear negative. After considering the characteristics and activities of this patient, you determine that although the priority for the patient is only medium according to the CDC guidelines, prolonged exposure may have occurred, and thus the risk of transmission may be high for some contacts.

What is the time frame for your investigation? Using CDC criteria (symptoms, smear status and CXR), you calculate that the beginning of the period of infectiousness is 3 months before symptom onset or the first positive clinical finding consistent with TB disease, whichever is longer.

How do you prioritize contacts that may have been exposed?

Contact investigations are done for several reasons. These include: identification of contacts who have been exposed and who have the greatest risk of being infected and progressing to TB disease; finding any secondary or additional TB cases; and ensuring that all exposed contacts get fully tested.

The ultimate goal, however, is prevention - to ensure that the highest risk identified contacts complete a course of treatment for latent TB infection (LTBI). This objective is met by assigning a priority status to each identified contact (high, medium or low priority depending on their risk for progression to disease), and then focusing efforts and resources on the **high and medium risk contacts**, in order to increase the chances of successful treatment completion. This prioritization emphasis is a new and very important concept for the contact investigation process. Factors, such as characteristics of the index case and of the contact, (age, immune status, other medical conditions and amount of exposure), are the ones that you will need to consider **before** assigning priorities. Contacts will also need to be interviewed to determine medical or other individual factors that may affect their priority status.

The field investigation reveals that the patient lives with his wife and two children, ages three and seven. He works at a factory and is involved in church activities at least six hours a week. Given the patient's clinical presentation (smear negative and abnormal non-cavitary CXR) contact prioritization would include:

High priority - the three-year-old child because of age (<5yrs)

Medium priority - the remaining contacts (household, factory and church) based on their length of exposure.

Several tools are available from the Division of Tuberculosis Prevention and Control to assist you in conducting this risk assessment: the Initial TB Nursing Assessment form (#TB18), which provides a standard format for collecting case/suspect investigation information; the Transmission Risk assessment ***continued on page nine***

You Be the Epi

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Checklist, which asks additional detailed questions about various types of exposure sites (e.g. home, work, school) to help you assess potential for transmission, contact prioritization and guidelines for conducting CIs. In addition, the CDC guidelines for contact investigation contain helpful process-related tables, figures and algorithms. These guidelines are available from the TB Division or at the CDC website.

Citation and website

1. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis: Recommendations from the National Tuberculosis Controllers Association and CDC - *MMWR* 2005; 54) No. RR-15, 1-37).

CDC Website: www.cdc.gov/nchstp/tb/pubs/mmwrhtml/Maj_guide/ContactInvestigations.htm

MSM

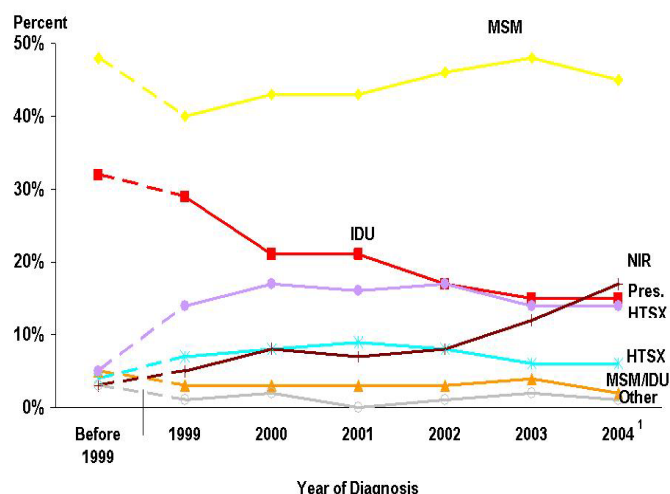
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men accounted for 25% to 28% of people diagnosed and reported with AIDS.

Mortality with AIDS

From 1995 to 2004, the proportion of deaths among persons with AIDS who were MSM (including those who injected drugs) decreased from 40% to 24%.

Percentage Distribution of Males Diagnosed with HIV Infection by Exposure Mode and Year of Diagnosis: MA, Before 1999, 1999-2004



Note: a dashed line is used to distinguish between pre-1999 data (which is an aggregate of multiple years) and annual data for subsequent years. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/05

GetTestedBoston.org Website Launched to Promote STD and HIV Testing in MSM

The updated www.gettestedboston.org website was launched in Spring 2006 to promote STD and HIV testing for men who have sex with men (MSM). From March through September, 2006, a record number (approximately 16,000) visitors viewed the site. The re-launch was prompted by an increase in sexually transmitted infections in MSM, as well as community feedback regarding the original site. In collaboration with the Research Institute of Fenway Community Health, the re-launch of www.gettestedboston.org was supported by coordinated promotions on several MSM websites.

The Division of STD Prevention revised the original [gettestedboston.org](http://www.gettestedboston.org) website to include information about gonorrhea, chlamydia (including LGV), HIV, hepatitis A, B, & C, HPV, herpes virus, syphilis and HIV.

In addition to these new pages, an easy-to-use, interactive referral map of Massachusetts was added which provides information on STD clinics and other health care providers that provide STD and HIV testing for MSM.

The www.gettestedboston.org website is a premier source of information for MSM. Its user-friendliness and comprehensive information on STD prevention and access to services represents a model that has received national attention. Visit gettestedboston.org for more information.

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Current and past issues of CD Update are available online at: <http://www.mass.gov/dph/cdc/update/comnews.htm>

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